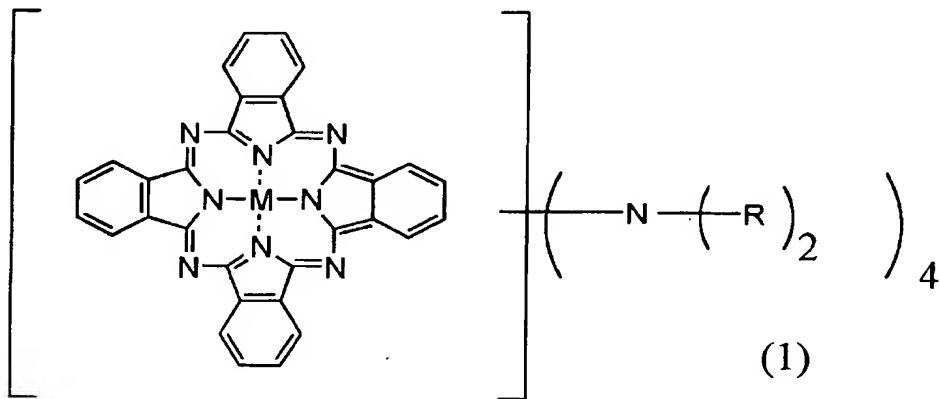


Claims

1. A metal phthalocyanine compound or the salt thereof having both acylamino group(s) and carboxyethylamino group(s) as substituents on the phthalocyanine structure.

2. The phthalocyanine compound or the salt thereof according to Claim 1 represented by Formula (1) as shown below:



(Wherein, each R independently shows a carboxyethyl group, an acyl group, or a hydrogen atom, provided that at least one of them is an acyl group and at least one of them is a carboxyethyl group; and M shows a metal atom).

3. The phthalocyanine compound or the salt thereof according to Claim 2, wherein M in Formula (1) is nickel, copper, zinc, aluminum, iron or cobalt.

4. The phthalocyanine compound or the salt thereof according to Claim 2 or 3, wherein R in Formula (1) is one kind

of acyl group selected from the group consisting of an optionally substituted, saturated or unsaturated, branched, chain or cyclic alkyl carbonyl group; an optionally substituted, saturated or unsaturated, branched, chain or cyclic alkyl sulfonyl group; an optionally substituted benzoyl group; and an optionally substituted phenyl sulfonyl group.

5. The phthalocyanine compound or the salt thereof according to Claim 1 or 2, wherein said acyl group is an aliphatic or aromatic acyl group of C1-C6 which may have a carboxyl group as a substituent.

6. The phthalocyanine compound or the salt thereof according to any one of Claims 2 to 5, wherein said metal atom is copper.

7. The salt of a phthalocyanine compound according to any one of Claims 2 to 6, wherein a solubility thereof to water is 2% by weight or more.

8. A phthalocyanine compound or the salt thereof obtained by reacting metal aminophthalocyanines with an acylating agent and a carboxyethylating agent.

9. The phthalocyanine compound or the salt thereof according to Claim 8, wherein said acylating agent is an acetic acid, a trimellitic acid, or the reactive derivatives thereof.

10. The phthalocyanine compound or the salt thereof according to Claim 8, wherein said carboxyethylating agent is an acrylic acid.

11. The phthalocyanine compound or the salt thereof according to any one of Claims 8 to 10, wherein said acylating agent and carboxyethylating agent are reacted in such amounts that amino groups of aminophthalocyanines are substituted by acyl groups in 1-60 mol% and by carboxyethyl groups in 40-99 mol%.

12. A water-based ink composition comprising the phthalocyanine compound or the salt thereof according to any one of Claims 1 to 11.

13. The water-based ink composition according to Claim 12, wherein said salt of the phthalocyanine compound is an alkanolamine salt, an alkali metal salt, or an ammonium salt of the phthalocyanine compound.

14. The water-based ink composition according to Claim 12 or 13, wherein said salt of the phthalocyanine compound is an ammonium salt of the phthalocyanine compound.

15. The water-based ink composition according to any one of Claims 12 to 14, comprising water and water-soluble organic solvent(s).

16. The water-based ink composition according to any one of Claims 12 to 15, wherein content of inorganic salt(s) in the water-based ink composition is 1% by weight or less.

17. The water-based ink composition according to any one of Claims 12 to 16, wherein the water-based ink composition is an ink for ink-jet recording.

18. A method for ink-jet recording by jetting ink droplets on a recording material in response to recording signals, characterized by using the water-based ink composition according to any one of Claims 12 to 17 as ink.

19. The method for ink-jet recording according to Claim 18, wherein said recording material is an information transmission sheet.

20. A tank containing the water-based ink composition according to any one of Claims 12 to 17.

21. An ink-jet printer set with the tank according to Claim 20.

22. A colored product comprising the phthalocyanine compound or the salt thereof according to any one of Claims 1 to 11.

23. A method for manufacturing a phthalocyanine compound or the salt thereof by acylating and carboxyethylating aminophthalocyanines.

24. A black metal phthalocyanine colorant which is obtained by acylating and carboxyethylating aminophthalocyanines.

25. The black metal phthalocyanine colorant according to Claim 24, wherein said compound having the phthalocyanine structure is a phthalocyanine compound or the salt thereof having an acylamino group and a carboxyethylamino group as substituents on the phthalocyanine structure.